Todd M Squires

List of Publications by Year in Descending Order

88 papers	8,314 citations	38 h-index	91 g-index
95 ext. papers	9,306 ext. citations	6.8 avg, IF	6.54 L-index

#	Paper	IF	Citations
88	Room-level ventilation in schools and universities.. *Atmospheric Environment: X*, **2022**, 13, 100152	2.8	3
87	Curvature-Mediated Forces on Elastic Inclusions in Fluid Interfaces.. *Langmuir*, **2022**,	4	1
86	Hydrogen Bonding Strength Determines Water Diffusivity in Polymer Ionogels. *Journal of Physical Chemistry B*, **2021**, 125, 5408-5419	3.4	2
85	Capillary force on an InertScolloid: a physical analogy to dielectrophoresis. *Soft Matter*, **2021**, 17, 3417-3442	3.4	2
84	Shape morphology of dipolar domains in planar and spherical monolayers. *Journal of Chemical Physics*, **2020**, 152, 234701	3.9	4
83	Surfactant dynamics: hidden variables controlling fluid flows. *Journal of Fluid Mechanics*, **2020**, 892,	3.7	38
82	Drop-in additives for suspension manipulation: Colloidal motion induced by sedimenting soluto-inertial beacons. *Physical Review Fluids*, **2020**, 5,	2.8	2
81	Heterogeneity, suspension, and yielding in sparse microfibrous cellulose gels 2: strain rate-dependent two-fluid behavior. *Rheologica Acta*, **2019**, 58, 231-239	2.3	5
80	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. *Physical Review X*, **2019**, 9,	9.1	4
79	Heterogeneity, suspension, and yielding in sparse microfibrous cellulose gels 1. Bubble rheometer studies. *Rheologica Acta*, **2019**, 58, 217-229	2.3	9
78	Long-range, selective, on-demand suspension interactions: Combining and triggering soluto-inertial beacons. *Science Advances*, **2019**, 5, eaax1893	14.3	10
77	Effect of Ethylcellulose on the Rheology and Mechanical Heterogeneity of Asphaltene Films at the Oil-Water Interface. *Langmuir*, **2019**, 35, 9374-9381	4	6
76	Design strategies for engineering soluto-inertial suspension interactions. *Physical Review E*, **2019**, 100, 052603	2.4	1
75	Interfacial rheology and direct imaging reveal domain-templated network formation in phospholipid monolayers penetrated by fibrinogen. *Soft Matter*, **2019**, 15, 9076-9084	3.6	9
74	Interfacial Rheology and Heterogeneity of Aging Asphaltene Layers at the Water-Oil Interface. *Langmuir*, **2018**, 34, 5409-5415	4	25
73	Evolution and mechanics of mixed phospholipid fibrinogen monolayers. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	9
72	Measuring Interfacial Polymerization Kinetics Using Microfluidic Interferometry. *Journal of the American Chemical Society*, **2018**, 140, 3173-3176	16.4	56

71	Nonlinear chiral rheology of phospholipid monolayers. *Soft Matter*, **2018**, 14, 2476-2483	3.6	12
70	Interfacial rheology of coexisting solid and fluid monolayers. *Soft Matter*, **2017**, 13, 1481-1492	3.6	14
69	Micro-plumes for nano-velocimetry. *Journal of Fluid Mechanics*, **2017**, 832, 1-4	3.7	4
68	Irreversible particle motion in surfactant-laden interfaces due to pressure-dependent surface viscosity. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170346	2.4	3
67	A hyaluronic acid conjugate engineered to synergistically and sequentially deliver gemcitabine and doxorubicin to treat triple negative breast cancer. *Journal of Controlled Release*, **2017**, 267, 191-202	11.7	51
66	Probe microrheology without particle tracking by differential dynamic microscopy. *Rheologica Acta*, **2017**, 56, 863-869	2.3	22
65	Diffusiophoresis in Ionic Surfactant Gradients. *Langmuir*, **2017**, 33, 9694-9702	4	25
64	Pressure-dependent surface viscosity and its surprising consequences in interfacial lubrication flows. *Physical Review Fluids*, **2017**, 2,	2.8	11
63	Dark-field differential dynamic microscopy. *Soft Matter*, **2016**, 12, 2440-52	3.6	39
62	Determination of Surface Potential and Electrical Double-Layer Structure at the Aqueous Electrolyte-Nanoparticle Interface. *Physical Review X*, **2016**, 6,	9.1	102
61	Collective Rayleigh-Plateau Instability: A Mimic of Droplet Breakup in High Internal Phase Emulsion. *Langmuir*, **2016**, 32, 2549-55	4	5
60	Isostructural solid-solid phase transition in monolayers of soft core-shell particles at fluid interfaces: structure and mechanics. *Soft Matter*, **2016**, 12, 3545-57	3.6	76
59	Soluto-inertial phenomena: Designing long-range, long-lasting, surface-specific interactions in suspensions. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 8612-7	11.5	55
58	Diffusiophoretic Focusing of Suspended Colloids. *Physical Review Letters*, **2016**, 117, 258001	7.4	39
57	Linear and nonlinear microrheometry of small samples and interfaces using microfabricated probes. *Journal of Rheology*, **2016**, 60, 141-159	4.1	19
56	Surface viscosity and Marangoni stresses at surfactant laden interfaces. *Journal of Fluid Mechanics*, **2016**, 792, 712-739	3.7	36
55	Direct Measurements of Colloidal Solvophoresis under Imposed Solvent and Solute Gradients. *Langmuir*, **2015**, 31, 4402-10	4	41
54	Electric double-layer structure in primitive model electrolytes: comparing molecular dynamics with local-density approximations. *Langmuir*, **2015**, 31, 3553-62	4	48

53	Colloidal binary mixtures at fluid-fluid interfaces under steady shear: structural, dynamical and mechanical response. *Soft Matter*, **2015**, 11, 8313-21	3.6	25
52	Measuring concentration fields in microfluidic channels in situ with a Fabry-Perot interferometer. *Lab on A Chip*, **2015**, 15, 1689-96	7.2	11
51	Induced charge electroosmosis micropumps using arrays of Janus micropillars. *Lab on A Chip*, **2014**, 14, 3300-12	7.2	29
50	Adsorption energies of poly(ethylene oxide)-based surfactants and nanoparticles on an air-water surface. *Langmuir*, **2014**, 30, 110-9	4	23
49	Influence of molecular coherence on surface viscosity. *Langmuir*, **2014**, 30, 8829-38	4	21
48	Platelet-like nanoparticles: mimicking shape, flexibility, and surface biology of platelets to target vascular injuries. *ACS Nano*, **2014**, 8, 11243-53	16.7	228
47	Enhanced charging kinetics of porous electrodes: surface conduction as a short-circuit mechanism. *Physical Review Letters*, **2014**, 113, 097701	7.4	51
46	Local, real-time measurement of drying films of aqueous polymer solutions using active microrheology. *Langmuir*, **2014**, 30, 5230-7	4	9
45	Surface shear inviscidity of soluble surfactants. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 3677-82	11.5	72
44	Cross-stream migration vs. anisotropic relaxation: Non-Boltzmann distributions in dissipative systems. *AICHE Journal*, **2014**, 60, 1434-1450	3.6	
43	Effect of cholesterol nanodomains on monolayer morphology and dynamics. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E3054-60	11.5	68
42	Microfluidic Microdialysis: Spatiotemporal Control over Solution Microenvironments Using Integrated Hydrogel Membrane Microwindows. *Physical Review X*, **2013**, 3,	9.1	9
41	Drops on soft surfaces learn the hard way. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 12505-6	11.5	7
40	Increasing the detection speed of an all-electronic real-time biosensor. *Lab on A Chip*, **2012**, 12, 954-9	7.2	14
39	Micro-macro-discrepancies in nonlinear microrheology: I. Quantifying mechanisms in a suspension of Brownian ellipsoids. *Journal of Physics Condensed Matter*, **2012**, 24, 464106	1.8	9
38	Micro-macro discrepancies in nonlinear microrheology: II. Effect of probe shape. *Journal of Physics Condensed Matter*, **2012**, 24, 464107	1.8	7
37	Interfacial microrheology of DPPC monolayers at the air□water interface. *Soft Matter*, **2011**, 7, 7782	3.6	87
36	Active microrheology and simultaneous visualization of sheared phospholipid monolayers. *Nature Communications*, **2011**, 2, 312	17.4	108

35	Electrokinetics at liquid/liquid interfaces. *Journal of Fluid Mechanics*, **2011**, 684, 163-191	3.7	22
34	Synthesis of multifunctional micrometer-sized particles with magnetic, amphiphilic, and anisotropic properties. *Advanced Materials*, **2011**, 23, 2348-52	24	52
33	A theoretical bridge between linear and nonlinear microrheology. *Physics of Fluids*, **2011**, 23, 063102	4.4	13
32	Microfabricated deflection tensiometers for insoluble surfactants. *Applied Physics Letters*, **2010**, 97, 133505	3.4	12
31	Active microrheology: a proposed technique to measure normal stress coefficients of complex fluids. *Physical Review Letters*, **2010**, 105, 156001	7.4	36
30	Fluid Mechanics of Microrheology. *Annual Review of Fluid Mechanics*, **2010**, 42, 413-438	22	456
29	Suppression of electro-osmotic flow by surface roughness. *Physical Review Letters*, **2010**, 105, 144503	7.4	51
28	An automated, high-throughput experimental system for induced charge electrokinetics. *Lab on A Chip*, **2010**, 10, 2350-7	7.2	10
27	A furtive stare at an intra-cellular flow. *Journal of Fluid Mechanics*, **2010**, 642, 1-4	3.7	3
26	Tensorial generalized Stokes–Einstein relation for anisotropic probe microrheology. *Rheologica Acta*, **2010**, 49, 1165-1177	2.3	15
25	Induced-charge electrokinetic phenomena. *Current Opinion in Colloid and Interface Science*, **2010**, 15, 203-213	7.6	190
24	The influence of hydrodynamic slip on the electrophoretic mobility of a spherical colloidal particle. *Physics of Fluids*, **2009**, 21, 042001	4.4	95
23	Induced-charge electrokinetics: fundamental challenges and opportunities. *Lab on A Chip*, **2009**, 9, 2477-83	7.2	70
22	Small amplitude active oscillatory microrheology of a colloidal suspension. *Journal of Rheology*, **2009**, 53, 357-381	4.1	45
21	Ion steric effects on electrophoresis of a colloidal particle. *Journal of Fluid Mechanics*, **2009**, 640, 343-356	3.7	64
20	Making it stick: convection, reaction and diffusion in surface-based biosensors. *Nature Biotechnology*, **2008**, 26, 417-26	44.5	680
19	Nonlinear microrheology: bulk stresses versus direct interactions. *Langmuir*, **2008**, 24, 1147-59	4	70
18	Symmetry unbreaking in the shapes of perfect projectiles. *Physics of Fluids*, **2008**, 20, 093606	4.4	10

17	Fundamental aspects of concentration polarization arising from nonuniform electrokinetic transport. *Physics of Fluids*, **2008**, 20, 087102	4.4	51
16	Surprising consequences of ion conservation in electro-osmosis over a surface charge discontinuity. *Journal of Fluid Mechanics*, **2008**, 615, 323-334	3.7	41
15	Zone sculpting using partitioned electrokinetic injections. *Applied Physics Letters*, **2007**, 91, 203511	3.4	1
14	Report of the Symposium on Interactions for Dispersed Systems in Newtonian and Viscoelastic Fluids, Guanajuato, Mexico, 2006a). *Physics of Fluids*, **2006**, 18, 121501	4.4	2
13	Breaking symmetries in induced-charge electro-osmosis and electrophoresis. *Journal of Fluid Mechanics*, **2006**, 560, 65	3.7	244
12	Microfluidics: Fluid physics at the nanoliter scale. *Reviews of Modern Physics*, **2005**, 77, 977-1026	40.5	3112
11	Forces during bacteriophage DNA packaging and ejection. *Biophysical Journal*, **2005**, 88, 851-66	2.9	228
10	Steady advection□iffusion around finite absorbers in two-dimensional potential flows. *Journal of Fluid Mechanics*, **2005**, 536, 155-184	3.7	23
9	Clinical implications of a mathematical model of benign paroxysmal positional vertigo. *Annals of the New York Academy of Sciences*, **2005**, 1039, 384-94	6.5	45
8	Optimizing the vertebrate vestibular semicircular canal: could we balance any better?. *Physical Review Letters*, **2004**, 93, 198106	7.4	14
7	A mathematical model for top-shelf vertigo: the role of sedimenting otoconia in BPPV. *Journal of Biomechanics*, **2004**, 37, 1137-46	2.9	81
6	Induced-charge electro-osmosis. *Journal of Fluid Mechanics*, **2004**, 509, 217-252	3.7	549
5	Stability of a charged particle in a combined Penning-Ioffe trap. *Physical Review Letters*, **2001**, 86, 5266-9	7.4	46
4	Effective pseudo-potentials of hydrodynamic origin. *Journal of Fluid Mechanics*, **2001**, 443, 403-412	3.7	40
3	Like-charge attraction and hydrodynamic interaction. *Physical Review Letters*, **2000**, 85, 4976-9	7.4	155
2	Hydrodynamic coupling of two brownian spheres to a planar surface. *Physical Review Letters*, **2000**, 85, 3317-20	7.4	188
1	A discourse analysis of the Japanese particle sa. *Pragmatics*, **1994**, 4, 1-29	2	19